



Board Report

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Agenda Number: 37.

SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE JUNE 21, 2018

**SUBJECT: TAP FAREBOX AND STATION VALIDATOR UPGRADE
PROJECT UPDATE, BUDGET, AND SCHEDULE**

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATIONS

AUTHORIZE the Chief Executive Officer to:

- A. ESTABLISH a Life-of-Project budget of \$45,000,000 for the purchase of bus farebox and station validator hardware and installation, and necessary software upgrades. The \$45,000,000 will provide funding for the subsequent contract recommendations (Items B to F);
- B. AWARD sole source Contract No. PS53915000 to Genfare SPX, Inc., as the original equipment manufacturer, for procurement of bus farebox, motherboard, farebox lid, and other hardware components to upgrade the fareboxes in the amount of \$10,331,252, inclusive of sales tax;
- C. EXECUTE Modification No. 7 to Contract No. PS30203139, with Axiom xCell, Inc. ("Axiom"), for software modifications to enhance security and increase compatibility to the fare enforcement app in the amount of \$167,122; increasing the total contract value from \$2,000,944.20 to \$2,168,066.20;
- D. NEGOTIATE and execute Modification No. 154 to Contract No. OP02461010, with Cubic Transportation Systems, Inc. ("Cubic"), for the purchase and installation of station validators, fare collection software modifications, security enhancements and system integration oversight in the not to exceed amount of \$22,104,750, increasing the total contract value from \$270,601,808, to \$292,706,558;
- E. NEGOTIATE and execute a Memorandum of Understanding with municipal operators who require fare collection system upgrades and outline requirements, pricing and payment schedule; and
- F. AMEND the FY19 budget for an additional 11 Full-Time Employees (FTEs) and \$1,944,531 to expedite bus farebox installation to be ready for new security requirements for the TAP mobile app and for other fare payment technologies.

ISSUE

On April 26, 2018, the Board of Directors approved programming of up to \$55 million to upgrade bus farebox equipment and rail station validators currently beyond their useful life. This upgrade will enhance security, prepare for new payment technologies and ensure near real-time communications.

Staff now returns to the Board with a recommendation for two contract modifications and a sole source contract award to ensure a seamless transition between the old and new equipment.

DISCUSSION

Staff recommended a multi-phase upgrade approach to address equipment obsolescence, enhance security of the fare collection system and prepare for new payment technologies including open payments.

The recommended contract award and modifications only address Phase 1. Phase 1 consists of hardware and software upgrades to the fareboxes and station validators to address aging equipment, enhance system security, ensure near real time communications and enable new payment options. Phase 2 consists of additional software enhancements to accept credit and debit card payment (open payments).

Municipal Operators

The municipal operators with aging fareboxes and equipment - Antelope Valley Transit Authority, Culver CityBus, Foothill Transit, GTrans (Gardena), Montebello Bus Lines, Norwalk Transit, Santa Clarita Transit, Torrance Transit, and LADOT - will contract directly with Cubic to upgrade their respective systems. Metro is partnering with the municipal operators to benefit from high-volume purchases.

The upgrades to their systems will ensure their fare collection equipment will be prepared for new technological advances in mobile and credit/debit card payment options.

Procurement Strategy

The procurement strategy for this project is two-part; the recommendations presented in this report are Part 1. Part 2 is the procurement of the bus operator's Driver Control Unit (DCU), a tablet that will be mounted to and controls the bus farebox. Procurement staff is currently procuring the DCU equipment and staff will return to the Board in July for a separate contract award.

The procurement process for Recommendations B, C, and D are summarized below:

A. Sole Source Contract to Genfare SPX, Inc. ("GFI") - Recommendation B

The contract with GFI will include the purchase of new logic boards, farebox lids, garage computers, and other GFI-related hardware (internal cabling, etc.). The farebox lid includes improved visual displays to enhance the customer experience. A comparison of the old and new bus farebox lids is

shown in Attachment D. GFI will be responsible for assembling the farebox offsite with upgraded components, and installation of the smartcard readers.

The upgrade to the TAP GFI farebox and garage computers requires the specialized knowledge that only GFI possesses since GFI was the original manufacturer that provided Metro and other TAP partner agencies with the equipment. There was no SBE goal on this contract by itself, because this company was a subcontractor of the UFS contract with Cubic at the time.

B. Contract Modification to Axiom - Recommendation C

The Modification to the Axiom contract is a software upgrade to the existing fare enforcement Mobile Phone Validators (“MPV”). The software modification will allow the MPVs to process new mobile fare media.

Axiom made a 100% SBE commitment and is currently meeting their SBE commitment with an SBE participation of 100%.

C. Contract Modification to Cubic - Recommendation D

The Cubic Contract Modification will include software development for the driver control units (tablet devices), near real-time communications, system security enhancements, smartcard readers, and station validators. Other services included in the Contract Modification are Project Management oversight for system integration support between the software modifications and vendors who will supply equipment hardware and the installation of the upgraded fareboxes on the three Contracted Services bus fleets and installation of the station validators. TAP and Procurement staff are finalizing negotiations with Cubic and will execute the Contract Modification upon completion, pending Board approval.

Timeline and Staffing

The expedited timeline presented in Attachment E demonstrates design, development and installation of all Metro and Contracted Services buses within 12 months of Board approval. The installation of the upgraded fareboxes on the three Contracted Services bus fleets will be handled and completed by Cubic.

To ensure seamless transition from the old to the new equipment and to protect the manufacturer’s one year warranty, the following replacement plan will be implemented:

1. Staff will remove the old fareboxes and ship them to the vendor
2. The vendor will upgrade the fareboxes with new computer boards and circuitry and return them to Metro
3. Staff will install the upgraded fareboxes and complete the required wiring
4. Staff will also continue to maintain the fareboxes as they do currently

To expedite installation to be ready for new security requirements for the TAP mobile app and for other fare payment technologies, eleven (11) additional full-time employees (FTEs) - ten (10)

Electronic Communication Technicians and one (1) Supervisor - are requested. Operations will be responsible for acquiring and management of the additional employees by December 2018.

Staffing Analysis

The staffing level for the escalated farebox installation effort was determined by maximizing the number of currently available personnel and the hours required to complete the installation within the required time frame. Utilizing existing staff resulted in a shortfall of 11 FTEs.

DETERMINATION OF SAFETY IMPACT

No adverse safety impacts are anticipated.

FINANCIAL IMPACT

The cost of Metro's station validators and farebox refurbishment for Metro and the TAP partner agencies is estimated to be a total of \$55 million. This includes \$45 million for all Metro costs of equipment purchase, installation, and necessary software upgrades as well as \$10 million for the upgrade cost of the other nine municipal operators. Metro staff will work with the municipal operators to develop a cost sharing plan for the \$10 million in TAP partner agency upgrades.

Impact to Budget

Upon Board approval, \$55 million will be added to the FY19 Budget. The \$55 million total project cost will be funded through a combination of \$27.5 million in State Local Partnership Program (LPP) formula funds and \$27.5 million in local funds, including cost sharing provided by the municipal operators. The State LPP funds require a dollar for dollar match of local funds and are not eligible for bus and rail operations. The Executive Officer of TAP and Project Manager will be responsible for budgeting costs in future years, if needed. The Cost Center manager in Operations will be responsible for budgeting FTE labor costs in future years.

ALTERNATIVES CONSIDERED

The alternative to the proposed farebox and station validators upgrades is to not proceed. This is not recommended as customers will not benefit from the new payment technologies, and frequent equipment breakdowns may result in lost revenue.

As Metro expedites rail construction projects in preparation for the 2028 Summer Olympics, it is important that TAP equipment is also upgraded to complement the enhanced infrastructure and provide visitors state-of-the-art fare payment options.

NEXT STEPS

- Upon approval by the Board, staff will execute the sole source contract with GFI and execute the Contract Modifications with Cubic and Axiom to proceed with upgrading TAP fareboxes and station validators

- Staff will draft and execute Memorandum of Understanding (MOU) with each municipal operator to determine pricing scheme and payment schedule
- With Board approval, Operations will move forward with the recruitment and training of 11 additional FTEs by December 2018
- Staff will return to the Board in July to seek approval for Part 2 of the procurement: approval to award contract for the purchase of the tablet Driver Control Units (DCU)
- Complete installation is expected by June 2019

ATTACHMENTS

Attachment A - Procurement Summaries

Attachment B - Contract Modification/Change Order Log(s)

Attachment C - DEOD Summaries

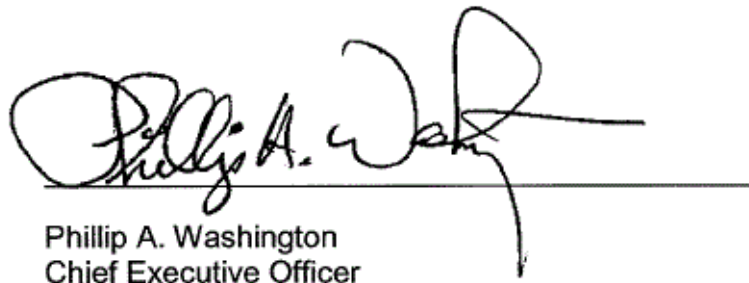
Attachment D - Comparison of Old and New Farebox Lids

Attachment E - Timeline for TAP Equipment Installation

Attachment F - Bus Farebox and Station Validators Upgrade Equipment Quantities

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